

IN THE CLAIMS:

Please amend claims 1, 15, and 23, add new claims 30-36, and cancel claims 8-14 and 18-22. The pending claims are as follows:

1. (Currently Amended) A hydrophilic polyester fiber comprising:
a polyester fiber; and
a precipitate from an aqueous mixed dispersion on the surface of the polyester fiber,
wherein said aqueous mixed dispersion contains (a) a polyester-polyether block copolymer composed of a polyester component and a polyether component, (b) an anionic surfactant, (c) a cationic surfactant, and (d) at least one of a nonionic surfactant and an amphoteric surfactant,

wherein, when heated to 35°C or higher, said aqueous mixed dispersion produces an ion complex, and ~~precipitates~~ said block copolymer and said ion complex produced from at least said anionic surfactant and said cationic surfactant precipitate on the fiber surface, wherein said dispersion adheres to said polyester fiber, making said polyester fiber hydrophilic.
2. (Previously Amended) The hydrophilic polyester fiber according to claim 1, wherein said polyester-polyether block copolymer comprises:
an aromatic dicarboxylic acid, an aliphatic dicarboxylic acid, or their ester type derivatives as an acid component; and
a polyoxyalkylene glycol with a number average molecular weight of 500 or higher or its derivative as said polyether component,
wherein said polyester-polyether block copolymer is produced by copolymerizing 5 to 150 wt.% of said polyether component with said polyester component.
3. (Original) The hydrophilic polyester fiber according to claim 2, wherein 0.05 to 2.0 parts by weight of said polyester-polyether block copolymer is supplied to 100 parts by weight of said fiber.
4. (Previously Cancelled)

5. (Original) The hydrophilic polyester fiber according to claim 1, wherein said polyester fiber is made of a polyester mainly containing an ethylene terephthalate unit.
6. (Original) The hydrophilic polyester fiber according to claim 1, wherein said polyester fiber is a core-sheathed type or side by side type conjugate of two kinds of polyesters having at least 20°C difference in melting points or softening points.
7. (Withdrawn) A hydrophilic nonwoven fabric comprising a fiber web containing 120 wt.% or more of a hydrophilic polyester fiber:
wherein said hydrophilic polyester fiber as entangled by at least one entangling method selected from a needle punching method, a stitch bonding method, a thermal bonding method, and a water jet entangling method and is made hydrophilic by applying an aqueous mixed dispersion to the surface and heating to 35°C or higher:
and
wherein said aqueous mixed dispersion contains a polyester-polyether block copolymer composed of a polyester component and a polyether component and is stable at lower than 35°C and precipitates said polyester-polyether block copolymer when its dispersion state is broken by being heated to 35°C or higher.

Claims 8-14 (Currently canceled).

15. (Currently Amended) A method for producing a hydrophilic polyester fiber comprising steps of:
applying an aqueous mixed dispersion to the surface of the fiber, wherein said aqueous mixed dispersion comprises (a) a polyester-polyether block copolymer composed of a polyester component and a polyether component, (b) an anionic surfactant, (c) a cationic surfactant, and (d) at least one of a nonionic surfactant and an amphoteric surfactant, wherein said aqueous mixed dispersion is stable at lower than 35°C; and
heating the fiber to 35°C or higher, thereby forming an ion complex comprising said anionic surfactant and said cationic surfactant and precipitating said polyester-polyether

block copolymer and said ion complex on the fiber surface ~~to provide hydrophilicity excellent in durability when either one of said anionic surfactant and cationic surfactant is mixed with said nonionic surfactant and/or amphoteric surfactant and its dispersion state is broken,~~ thereby producing a hydrophilic polyester fiber.

16. (Previously Amended) The method for producing a hydrophilic polyester fiber according to claim 15, wherein said polyester-polyether block copolymer comprises:

an aromatic dicarboxylic acid, an aliphatic dicarboxylic acid, or their ester type derivatives as an acid component; and

a polyoxyalkylene glycol with a number average molecular weight of 500 or higher or its derivative as said polyether component,

wherein said polyester-polyether block copolymer is produced by copolymerizing 5 to 150 wt.% of said polyether component with said polyester component.

17. (Withdrawn) A method for producing a hydrophilic polyester type nonwoven fabric comprising steps of supplying an aqueous mixed dispersion, which contains a polyester-polyether block copolymer and is stable at lower than 35°C and precipitates said polyester-polyether block copolymer when its dispersion state is broken by being heated to 35°C or higher, to a nonwoven fabric containing 80 wt.% of a polyester fiber and heating the fiber at 35°C or higher.

Claims 18-22 (Currently canceled).

23. (Currently Amended) A hydrophilic polyester fiber comprising:

a polyester fiber; and

a coating on the fiber comprising (a) a polyester-polyether block copolymer comprising a polyester component and a polyether component; ;(b) an ion complex comprising (b) (i) an anionic surfactant, (e) and (ii) a cationic surfactant; ~~and (d)~~ (c) at least one of a nonionic surfactant and an amphoteric surfactant.

24. (Previously Added) The hydrophilic polyester fiber according to claim 23, wherein said polyester-polyether block copolymer comprises:

an aromatic dicarboxylic acid, an aliphatic dicarboxylic acid, or their ester type derivatives as an acid component; and

a polyoxyalkylene glycol with a number average molecular weight of 500 or higher or its derivative as said polyether component,

wherein said polyester-polyether block copolymer is produced by copolymerizing 5 to 150 wt.% of said polyether component with said polyester component.

25. (Previously Added) The hydrophilic polyester fiber according to claim 24, wherein 0.05 to 2.0 parts by weight of said polyester-polyether block copolymer is supplied to 100 parts by weight of said fiber.

26. (Previously Added) The hydrophilic polyester fiber according to claim 23, wherein said polyester fiber is made of a polyester mainly containing an ethylene terephthalate unit.

27. (Previously Added) The hydrophilic polyester fiber according to claim 23, wherein said polyester fiber is a core-sheathed type or side by side type conjugate of two kinds of polyesters having at least 20°C difference in melting points or softening points.

28. (Withdrawn) An aqueous dispersion for coating a fiber, comprising:

a polyester-polyether block copolymer comprising a polyester component and a polyether component;

an anionic surfactant;

a cationic surfactant; and

at least one of a nonionic surfactant and an amphoteric surfactant,

wherein the dispersion produces an ion complex at temperatures greater than 35°C.

29. (Withdrawn) A hydrophilic polyester fiber prepared by the method of claim 15.

30. (New) The hydrophilic polyester fiber according to claim 1, wherein each of (b), (c), and (d) ranges from 5 to 200 wt % relative to said aqueous mixed dispersion.
31. (New) The hydrophilic polyester fiber according to claim 1, wherein said aqueous mixed dispersion produces an ion complex at a temperature between 35°C and 50°C.
32. (New) The method according to claim 15, further comprising heating the fiber to between 35°C and 50°C.
33. (New) The method according to claim 15, wherein each of (b), (c), and (d) ranges of from 5 to 200 wt % relative to said block copolymer.
34. (New) The method according to claim 15, wherein the block copolymer is not exhausted into the polyester fiber.
35. (New) The method according to claim 16, wherein the block copolymer is not exhausted into the polyester fiber.